



# Application of the SAS Method in Beginning Reading Learning in the 21st Century

Francisca Lisa Andriyani<sup>1\*</sup>, Hermanto<sup>2</sup>

<sup>1,2</sup> Pendidikan Dasar, Yogyakarta State University, Yogyakarta, Indonesia

## ARTICLE INFO

### Article history:

Received December 28, 2021

Accepted February 12, 2022

Available online February 25, 2022

### Kata Kunci:

Metode SAS, Membaca Permulaan, Keterampilan Abad 21

### Keywords:

SAS Method, Beginning Reading, 21st Century Skills



This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.

Copyright © 2022 by Author. Published by Universitas Pendidikan Ganesha.

## ABSTRAK

Masih banyak guru mengalami problematika dalam pengajaran membaca permulaan menggunakan metode SAS di Abad 21. Problem tersebut diperparah lagi dengan adanya perubahan sistem pengajaran secara tiba-tiba akibat Pandemi Covid19 yang kemudian berimbas pada pelaksanaan pembelajaran yang dilaksanakan secara daring. Oleh karena itu, penelitian ini bertujuan untuk menganalisis apakah guru sudah menerapkan metode SAS dalam pembelajaran membaca permulaan di abad 21 selama pembelajaran daring dengan baik ataukah belum. Jenis penelitian ini adalah penelitian survei dengan pendekatan deskriptif kuantitatif. Jumlah sampel sebanyak 64 orang tua siswa yang dipilih secara acak dengan menggunakan teknik Probability sampling tipe simple random sampling. Pengambilan sampel pada penelitian dihitung menggunakan tabel penentuan sampel minimal menurut Krejcie dan Morgan. Instrumen yang digunakan meliputi kuesioner, observasi, dan wawancara. Data hasil penelitian menunjukkan bahwa terdapat peningkatan pada setiap pertemuan pembelajaran membaca permulaan menggunakan metode SAS di abad 21 selama pembelajaran daring. Hal ini dibuktikan dengan didapatkannya hasil pada pertemuan pertama sangat baik, pertemuan kedua sebesar sangat baik, pertemuan ketiga sangat baik dan pertemuan keempat sangat baik. Selain itu, data hasil penyebaran kuesioner menunjukkan bahwa keseluruhan orang tua siswa mengatakan bahwa bahwa rerata kecenderungan guru sudah menerapkan metode SAS di abad 21 dalam pembelajaran daring kategori baik.

## ABSTRACT

Many teachers still experience problems in teaching early reading using the SAS method in the 21st Century. This problem is exacerbated by the sudden change in the teaching system due to the Covid19 Pandemic, which affects the implementation of boldly carried out learning. Therefore, this study aims to analyze whether teachers have applied the SAS method in early reading learning in the 21st Century during bold learning or not. This type of research is survey research with a quantitative descriptive approach. The number of samples was 64 parents of students who were randomly selected using the probability sampling technique of simple random sampling type. Sampling in the study was calculated using the minimum sample table according to Krejcie and Morgan. The instruments used include questionnaires, observations, and interviews. The research data shows an increase in each initial learning meeting using the SAS method in the 21st Century during bold learning. It is proven by the results obtained in the first meeting, which were very good, the second meeting was very good, the meeting was very good, and the meeting was very good. In addition, the data on the spread of distribution shows that all parents say that the average tendency of teachers to apply the SAS method in the 21st Century in learning is in the good brave category.

## 1. INTRODUCTION

Indonesian as the language of instruction at all levels of education plays an important role in efforts to improve the quality of education, especially elementary schools. Learning Indonesian in elementary schools is essentially aimed at making students skilled in using Indonesian for various purposes, especially to communicate and interact with other people (Indriyani & Yusnani, 2021; Pambudi et al., 2019; Suyono et al., 2017). The content of learning Indonesian in elementary school according to the 2013 Curriculum aims to develop four aspects of language including speaking, listening, reading, and writing (Arum & Yuanta,

2019; Mohamad Johan, 2018). The four language skills are a unified whole. All of these language skills are related to mutual support in the implementation of the learning process (Krismasari et al., 2019; Perni, 2019). One of the language skills that must be mastered by elementary school students is reading skills, because if students are skilled at reading, they will easily clarify their way of thinking (reasoning) through the information they get from reading activities (Budianti & Damayanti, 2017; Tahmidaten & Krismanto, 2020). The results of a survey conducted on fourth grade SD/MI students in the Progress in International Reading Literacy Study (PIRLS), an international study of reading in children around the world sponsored by The International Association for the Evaluation Achievement. The results of the study show that on average, Indonesian children are fourth from the bottom of 45 countries in the world (Mutji & Suoth, 2021; Sismulyasih Sb, 2018). The results of the PIRLS survey indicate that the condition of literacy skills, especially reading, of Indonesian students is still relatively low. This claim is also in accordance with the results of a UNESCO survey in 2012 which showed the reading index of the Indonesian people was 0.001. This means that out of 1,000 Indonesians, only 1 person reads seriously (Mutji & Suoth, 2021). Even though reading is one of the literacys needed in facing the challenges of the 21st century (Widodo et al., 2020).

Students in facing the challenges of the 21st century must be accustomed to mastering 21st century skills (Hirschman & Wood, 2018; Lavi et al., 2021; Malik, 2018). This is because 21st century skills must be presented in the learning process in the digital era (Kivunja, 2015; Malik, 2018; Redhana, 2019). There are various skills that students must possess in the 21st century, namely the ability to think critically and problem solving, the ability to communicate and collaborate, the ability to create and update, information and communication technology literacy, contextual learning skills, information skills and media literacy (Ichsan et al., 2019; Lavi et al., 2021; Rahmawati, 2019). One of the skills that bridge these skills is literacy. Literacy skills are needed by anyone, especially students. Literacy is a skill to manage information. Literacy skills enable students to communicate information in solving problems. Reading activities in school. This is because reading is the basic literacy that is needed in shaping global competence (Lin et al., 2019; A Widodo et al., 2019). Reading is one of the language skills that every student must have (Kusmayanti, 2019; Tahmidaten & Krismanto, 2020). This is because, in every aspect of student life involves reading activities. What's more, the very rapid progress of the times requires students to be able to have broader knowledge. Reading is a bridge and an absolute requirement for gaining knowledge (Tahmidaten & Krismanto, 2020; Yuniarti & Radia, 2020; Zhao & Wu, 2021). Everything obtained from reading activities will allow students to have high thinking power and broaden their horizons wawasan (Kurniaman & Noviana, 2016; Lai et al., 2019). The level of high and low reading ability can also affect the intensity of student learning. Learning to read in elementary schools is divided into two stages, namely preliminary reading and advanced reading (Memiş & Kandemir, 2019; Wang et al., 2021). The basic stages in learning to read begin with reading the beginning. Beginning reading skills are aimed at literacy skills, developing basic reading mechanisms, such as the ability to associate letters with the sounds of the language they represent, developing eye movements to read from left to right, reading simple words and sentences. This reading skill is taught in the early grades of Elementary School.

Learning to read early in the early grades is considered very important (Glover, 2017; Tse et al., 2019). This is because learning to read does not only play a role in improving students' language skills, but more than that, namely to improve students' abilities in studying other subjects (Lai et al., 2019; Sheen & Luximon, 2021; Vuong et al., 2019). In addition, the reading ability obtained at the beginning of reading will greatly affect the ability to read further. However, in reality, early reading learning carried out in elementary schools is still not satisfactory and not in line with expectations (Lin et al., 2019; Yuniarti & Radia, 2020). This is evidenced by the discovery of problems faced by students in beginning reading. common problems faced by students in beginning reading, including students' difficulties in reading word for word, incorrect paraphrasing, pronunciation errors, omissions, repetitions, reversals, insertions, substitutions, and using lip movements, using index fingers, and moving the head, vocal difficulties, clustering difficulties, diphthongs, dysgraphs, difficulty analyzing word structure, and not recognizing words in sentences. If the problem is not immediately addressed, it will have a negative impact on students, especially on the quality and learning outcomes of students in elementary school.

These problems need to be addressed immediately by finding solutions so that the learning carried out can provide optimal results and be able to improve student learning outcomes. Based on these problems, of course, parties are needed who are expected to be able to find solutions by providing guidance and direction to the problems faced by students. The teacher is one of the educators who is the spearhead in distributing knowledge to the next generation in an educational institution. This is because the high and low quality of education is influenced by the education intermediary itself, namely the teacher (Nathalia et al., 2015; Sutarto et al., 2020; Syahputra et al., 2017). Therefore, however, teachers, especially grade I elementary school teachers, must try really hard to be able to provide a good basis for abilities and in accordance with the level of student development. First grade elementary school students are students who

are in the age range of 7-8 years and are in the concrete operational stage. At this stage it is characterized by the development of a system of thought based on certain logical rules (Toropova et al., 2021; Ulfaeni et al., 2018). Students are able to make conclusions from something in real situations or by using concrete objects, and are able to consider two aspects of real situations together. At this stage, students have the enthusiasm to learn something, especially learning basic skills in reading. Therefore, teachers should use teaching methods that are appropriate to the level of students' reading development. One of the teaching methods that suit the level of student development is Structural Analytic Synthetic (SAS).

The Synthetic Structural Analytical Method (SAS) is a model that is devoted to learning to read early in the early grades (Chandrathilaka et al., 2021; Kumar & Baggi, 2022). This is because, this method considers students' language experience. In the operational process, the SAS method has steps based on operations in the sequence: 1) Structural displays the whole, 2) Analytical performs the decomposition process, 3) Synthetics performs recombination to the original structural form. The SAS method is based on several principles, namely the principle of linguistics (the study of language) which views the smallest language unit for communication as a sentence. Sentences are formed by the units of language below, namely words, syllables, and phonemes (letters) (Chen et al., 2021; Hermita et al., 2020; Sulaiman & Hasrianti, 2021). With the steps arranged in such a way, it makes it easy for students to follow the procedure and will quickly read on the next opportunity. Based on the linguistic basis, this method will help children master reading fluently. In addition, the SAS method is a method recommended and required by the government to teach beginning reading. This method will be applied efficiently and innovatively if there are no obstacles in its application.

However, in reality, the world of education is currently facing the Corona Virus Disease 2019 (Covid-19) pandemic. The problem encountered now is online learning began to complain about the Education sector, educators, students, and parents. It is certain that the government Learning using virtual media has many limitations. In addition, the length of learning is also reduced. So, situations like this are minimal, making teachers more focused on efforts to complete learning materials according to curriculum achievement (Nengrum et al., 2021; Solong, 2021). This can be the basic basis for a change in the teaching system for early reading using the SAS method. Therefore, it is recommended to balance between online and offline learning. This is because the application of online learning is very in line with the emphasis of the learning system in the 21st century (Nengrum et al., 2021). So that in the process of its application it requires special attention and readiness from teachers and students. Research related to the use of the SAS method in early reading has been carried out by several previous researchers. The results showed that learning to read at the beginning using the SAS method could increase students' activity and understanding in learning so that students' reading skills increased, because in principle this model has operational steps with a structural sequence (Damayanti et al., 2014; Jabir, 2020; Yusmiati, 2021). Based on previous research, problems in early reading, and the application of the SAS method in the 21st century, the researcher will conduct research on early reading skills and the application of the SAS method in the 21st century. The researcher wants to analyze the extent to which the application of SAS method in early reading learning in the 21st century is has met the 21st century learning aspects, the syntax of the SAS model, and is in accordance with online learning or not. Researchers will use survey research methods. The method was chosen because of the relatively large number of samples and in accordance with the objectives of the research to be carried out by the researcher. This study aims to analyze whether teachers have implemented the SAS method in early reading learning in the 21st century during online learning well or not.

## 2. METHOD

The research that will be conducted by the researcher is a descriptive quantitative research with survey method. Quantitative descriptive research is one type of research that aims to describe systematically, factually, and accurately about the facts and characteristics of certain populations, or try to describe phenomena in detail (Suharsaputra, 2018). Survey research is also defined as research that takes samples from a population and uses a questionnaire as a data collection tool. In this study, researchers used a questionnaire as a data source. When researchers use survey research, teachers and students as respondents are asked to provide answers. Answers from respondents will be processed using certain quantitative analysis techniques. Data collection by researchers is limited to samples for all populations. The population in this study were parents of grade I elementary school students in cluster IV Depok, Sleman, which consisted of Kentungan Elementary School, Caturtunggal 7 Elementary School, Samirono Elementary School, Colombo Complex Muhammadiyah Elementary School, and Kanisius Demangan Baru I Elementary School.

In this study, researchers used samples from the entire population of parents of grade I elementary school students in cluster IV Depok, Sleman as research samples. The population of parents of students was

chosen because they are respondents who are involved in assisting students during the online learning process so that they are considered to understand the process of the teaching and learning process. The researcher also used probability sampling technique of simple random sampling type in determining the sample of parents of students. Probability sampling is a sample selection process that is carried out randomly and objectively, in the sense that it is not based on the wishes of the researcher, so that each member of the population has a certain opportunity to be selected as a sample. Sampling in the study was calculated using the table for determining the minimum sample according to Krejcie and Morgan with a 95% confidence level and the results obtained were 64 samples for parents of students. After determining the sample size, the researcher then continued with the simple random sampling technique. This is done because to take samples at each school.

Data collection techniques used in this study were questionnaires, interviews, and documentation. The questionnaire used is closed, respondents are not allowed to provide answers other than the answer choices that have been determined. The answer choices that have been provided are "very good, good, medium, low, and very low" by putting a checklist (✓) in one of the answers, so that a firm answer is obtained. The researcher also used a structured interview guide sheet to find out things in depth related to the respondents' answers from the results of the completed questionnaire. The documentation in this study is not used to determine the application of the SAS method in early reading in the 21st century, but is used to analyze physical data that can be used as research evidence. The data analysis technique in this research is descriptive statistical analysis technique. In survey research, data analysis is needed to determine the level of application of the SAS method in early reading in the 21st century using a Likert scale (Sugiyono, 2017). The data used previously passed the stages of validity and reliability. Of the 60 questionnaire statements tested, 35 were declared valid and reliable.

### 3. RESULT AND DISCUSSION

#### Result

This study was raised from the problem of implementing learning, especially in terms of teaching early reading using the SAS method in the 21st century during online learning. So this study aims to determine the level of mastery of teachers in using the SAS method in teaching early reading in the 21st century during online learning. The instruments in this research are observation sheets, interview guidelines, and questionnaires. The instrument has been tested on students and is declared suitable for use. The activities assessed were the activities of grade I teachers during the process of teaching early reading using the SAS method in the 21st century during online learning, whether they were in accordance with the steps of the SAS method and the peculiarities of 21st century skills or not. The assessment was carried out by the observer, namely the researcher himself in the initial reading lesson in class I SD group IV Depok, Sleman.

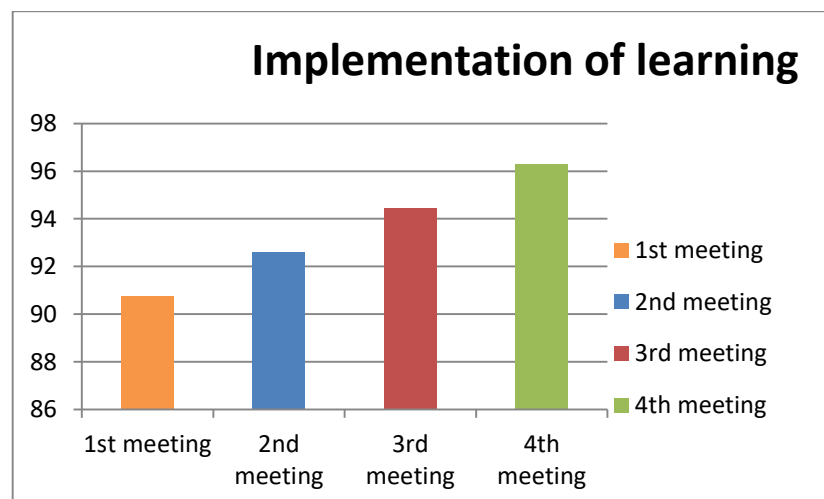


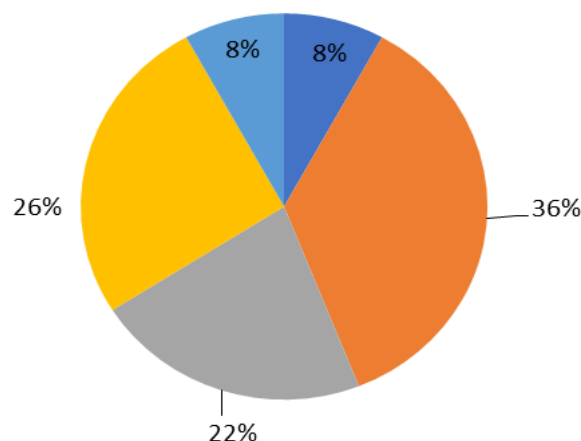
Figure 1. Implementation of learning

Beginning reading learning using the SAS method in the 21st century has increased in every meeting, where the first meeting was 90.74%, the second meeting was 92.59%, the third meeting was 94.44% and the fourth meeting was 96.29%. From these results, the mean will be searched to determine

the success criteria achieved in the implementation of lectures and the results obtained are 93.98%. With the acquisition of a percentage score of 93.98%, it can be ascertained that the success rate of teachers in applying the SAS method in online learning in the 21st century during online learning can be categorized as good. The questionnaire regarding the application of the SAS method in early reading in the 21st century consisted of 35 questions/statements, measured using a Likert scale with a score of one to five and distributed to 64 parents of grade 1 students at SD cluster IV Depok Sleman. The Sturges formula  $1 + 3.3 \log 64 = 6.973$  is brought closer to 7. The range of data is  $78 - 65 = 13$ . The length of the class interval of each group, which is 1.857, is brought closer to 2. The data that has been obtained is then calculated using the frequency distribution of filling out questionnaires by people old students. The frequency distribution data was processed to obtain descriptive statistical values with the help of Microsoft excel. The results of the analysis obtained a mean score of 91, 871 (92%). To find out the trend of whether teachers have applied the SAS method in the 21st century in online learning, it can be done by classifying the data using a scale of five. The following is the classification of data. The tendency of teachers to apply the SAS method in the 21st century in online learning is presented in Table 1. The following presents a circle of teacher tendencies in applying the SAS method of reading in the early 21st century in online learning in Figure 2.

**Table 1.** Classification of the Tendency of Teachers to Apply the SAS Method in The 21st Century in Online Learning

Kriteria	Interval	Frequency	Percent	Score
Very good	$X \geq 75,388$	5	8%	A
Good	$72,796 \leq X < 75,388$	23	36%	B
Enough	$70,204 \leq X < 72,796$	14	22%	C
Not good	$67,621 \leq X < 70,204$	17	26%	D
Not very good	$X < 67,621$	5	8%	E



**Figure 2.** Circle of Teacher Tendencies in Implementing Learning

Based on table 1 and figure 2, it shows that in the trend of teachers already implementing the SAS method in the 21st century in online learning, there are 5 parents (8%) who answered in the very good category, 23 parents (36%) answered in the good category, 14 parents (22%) answered in the medium category, 11 parents (26%) answered in the low category, and 5 parents (7.%) answered in the very low category. This shows that the average tendency of teachers to have applied the SAS method in the 21st century in online learning is in the good category, has met the peculiarities of 21st century learning, the syntax of the SAS model, and online learning.

**Discussion**

The SAS method is a method of learning early reading skills by displaying a complete sentence which is then broken down into words, syllables, and letters, then the parsed sentences are combined back into complete sentences as before (Farhurohman, 2019; Muriani et al., 2018; Sulaiman & Hasrianti, 2021). The results of the study prove, where the total score of the observations reached 93.98%. This figure shows that grade 1 teachers at SD cluster IV Depok, Sleman have implemented the SAS method of early reading in the 21st century during online learning well. This is due to the importance of 21st century skills for elementary school students when learning online. Therefore, the ability of educators (teachers) greatly supports the success of 21st century skills (Junedi et al., 2020)(Hanifa, 2017; Tondeur et al., 2019).

These abilities are contained in the profile of 21st century educators, namely knowledge, pedagogical, and product criteria. Beginning reading is important as a basic prerequisite for student achievement in learning (Glover, 2017; Jabir, 2020; Sulaiman & Hasrianti, 2021). In order to achieve student success, teachers need to give serious attention and design attractive learning designs in accordance with the principles of the 2013 Curriculum (Kurniawan & Noviana, 2016; Setiawan et al., 2020; Wulandari, 2020). instructional Media. However, 62% of parents are not satisfied with the learning media used by the teacher. This dissatisfaction is because the teacher lacks innovation in using learning media. Teachers are still dominantly using offline media which are then used during online learning, so they are considered less effective because they are not in accordance with the learning conditions currently being faced. The use of learning media will certainly have an impact on students' understanding in receiving the teaching material delivered by the teacher (Ferdiansyah et al., 2020; Gunawan et al., 2017; Jogezi et al., 2021). Therefore, the teacher must choose media that is suitable and in accordance with the situation and conditions of students (Aisyah & Muhammad Alif Kurniawan, 2021; Anggraini et al., 2019; Hosen et al., 2021).

Synthetic Analytic Structural Method (SAS) is one of the methods that can be used in the learning of beginning reading skills (Havisa et al., 2021; Kumar & Baggi, 2022). The results revealed that 74% of all parents of students surveyed admitted that teachers have taught by paying attention to the stages of beginning reading until students can parse sentences, begin learning beginning reading by displaying and introducing a whole sentence, parsing one sentence into words, words become syllables, syllables become letters. The process of decomposition/analysis in beginning reading learning with the SAS method, includes: (a) sentences into words (b) words into syllables, and (c) syllables into letters. This indicates that the teacher has conducted the beginning reading instruction in accordance with the stages of the application of the SAS method. The 21st century presents its own problems in the world of education (Bal-Taştan et al., 2018; Gürsoy, 2021; Setyawan & Ahsan, 2020). The results of the study revealed that 53% of all parents studied admitted that teachers used image stimuli, real objects, informal questions and answers to explore students' language (creativity), gave early reading teaching by starting from something known and known to students (critical thinking), collaborate in reading by playing games (collaboration), and often ask students (communication). The learning model and its assessment system in the 21st century should be directed at encouraging students to think critically; (2) creativity skills (creativity); (3) communication skills (communicating); and (4) collaboration (Chai & Kong, 2017; Sadaf & Johnson, 2017; Setyawan & Ahsan, 2020). This indicates that the teacher has carried out early reading teaching in accordance with the peculiarities of 21st century learning.

There needs to be a balance between online and offline learning (Nengrum et al., 2021; Singh & Thurman, 2019; Sutarto et al., 2020). The results of the study revealed that 52% of all parents studied admitted that teachers applied the SAS method in online learning and it was not much different from the application in offline learning. This shows that teachers have applied the SAS method of early reading in the 21st century during online learning, only using different teaching tools. In the online learning process, teachers use the zoom tool to communicate directly with students, collaborate on SAS learning with YouTube media, educational games, digital images to explore students' language and explain sentences. In the offline learning process, all early reading learning activities are carried out face-to-face and using print media facilities but do not leave the unique elements of the SAS method and 21st century skills. Because one of the teacher innovations that must be developed during this covid-19 pandemic is learning about century skills. (Octaberlina & Muslimin, 2020; Salmia & A. Muhammad Yusri, 2021; Waruwu, 2020).

#### 4. CONCLUSION

Online learning that is being carried out in the world of education, especially elementary school education, is a form of embodiment of the application of 21st century skills that are currently being promoted, which are related to the use of technology and literacy. Teachers who initially implemented the early reading teaching system using the SAS method offline switched to online learning. Therefore, of course this will be problematic and a change in the application of learning. However, based on the results of the research and discussion that have been put forward, it was found that the grade 1 teachers of SD cluster IV Depok Sleman succeeded in applying the SAS method of early reading in the 21st century during online learning well. However, the media used in the teaching system needs changes to adapt to the situation and conditions to be effective.

#### 5. REFERENCES

- Aisyah, S., & Muhammad Alif Kurniawan. (2021). Penggunaan Media Pembelajaran Daring pada Masa Pandemi COVID-19. *Jurnal Riset Madrasah Ibtidaiyah (JURMIA)*, 1(1), 48–56.

- <https://doi.org/10.32665/jurmia.v1i1.195>.
- Anggraini, W., Nurwahidah, S., Asyhari, A., Reftyawati, D., & Haka, N. B. (2019). Development of Pop-Up Book Integrated with Quranic Verses Learning Media on Temperature and Changes in Matter. *Journal of Physics: Conference Series*, 1155(1), 1–9. <https://doi.org/10.1088/1742-6596/1155/1/012084>.
- Arum, R. A. S., & Yuanta, F. (2019). Pengaruh Media Pop-Up Book Terhadap Hasil Belajar Siswa Sekolah Dasar Tema Indahya Keragaman Di Negeriku. *Prosiding Seminar Nasional Cendekiawan*, 2. <https://doi.org/10.25105/semnas.v0i0.5875>.
- Bal-Taştan, S., Davoudi, S. M. M., Masalimova, A. R., Bersanov, A. S., Kurbanov, R. A., Boiarchuk, A. V., & Pavlushin, A. A. (2018). The Impacts of Teacher's Efficacy and Motivation on Student's Academic Achievement in Science Education among Secondary and High School Students. *EURASIA Journal of Mathematics, Science and Technology Education*, 14(6), 2353–2366. <https://doi.org/10.29333/ejmste/89579>.
- Budianti, Y., & Damayanti, N. (2017). Pengaruh Metode KWL (Know Want to Learn) terhadap Keterampilan dan Minat Membaca Siswa. *Indonesian Journal of Primary Education*, 1(2), 13–18. <https://doi.org/10.17509/ijpe.v1i2.9311>.
- Chai, C. S., & Kong, S.-C. (2017). Professional learning for 21st century education. *Journal of Computers in Education*, 4(1), 1–4. <https://doi.org/10.1007/s40692-016-0069-y>.
- Chandratilaka, E. R. K., Baduge, S. K., Mendis, P., & Thilakarathna, P. S. M. (2021). Structural applications of synthetic fibre reinforced cementitious composites: A review on material properties, fire behaviour, durability and structural performance. *Structures*, 34. <https://doi.org/10.1016/j.istruc.2021.07.090>.
- Chen, T., Yin, S., & Wu, J. (2021). Nanomaterials meet microfluidics: Improved analytical methods and high-throughput synthetic approaches. *TrAC Trends in Analytical Chemistry*, 142. <https://doi.org/10.1016/j.trac.2021.116309>.
- Damayanti, Indriani, S., & Darmayanti, I. A. M. (2014). Teknik Guru Dalam Pembelajaran Membaca Permulaan Pada Siswa Kelas I (Studi Kasus Di Sd Negeri 1 Banjar Jawa). *Jurnal Pendidikan Bahasa Inggris Undiksha*, 1(2). <https://doi.org/10.23887/ijpbs.v2i1.3039>.
- Farhurohman, O. (2019). Pengembangan Model Bimbingan Belajar Membaca Berbasis Struktural Analitik Sintetik (Sas) Di Madrasah Ibtidaiyah. *Elementary: Islamic Teacher Journal*, 7(1).
- Ferdiansyah, F., Ambiyar, A., Zagoto, M. M., & Putra, I. E. D. (2020). Pemanfaatan Media Pembelajaran Berbasis E Learning dalam Meningkatkan Hasil Belajar pada Matakuliah Media Pembelajaran Musik. *KOMPOSISI: Jurnal Pendidikan, Bahasa Dan Seni*, 21(1), 63–72. <https://doi.org/10.24036/komposisi.v21i1.42098>.
- Glover, T. A. (2017). A Data-driven coaching model used to promote students response to early reading intervention. *Theory Into Practise*, 56(1), 13–20. <https://doi.org/10.1080/00405841.2016.1260401>.
- Gunawan, G., Sahidu, H., Harjono, A., & Suranti, N. M. Y. (2017). The effect of project based learning with virtual media assistance on student's creativity in physics. *Jurnal Cakrawala Pendidikan*, 2. <https://doi.org/10.21831/cp.v36i2.13514>.
- Gürsoy, G. (2021). Digital storytelling: Developing 21st century skills in science education. *European Journal of Educational Research*, 10(1), 97–113. <https://doi.org/10.12973/EU-JER.10.1.97>.
- Hanifa. (2017). Meningkatkan Kemampuan Guru dalam Menyusun Perencanaan Pembelajaran Melalui Pembinaan Kolaboratif Bagi Guru Kelas V di Dabin II Unit Pendidikan Kecamatan Gedangan. *Pedagogia: Jurnal Pendidikan*, 6(2). <https://doi.org/10.21070/pedagogia.v6i2.939>.
- Havisa, S., Solehun, S., & Putra, T. Y. (2021). Pengaruh Metode Suku Kata Menggunakan Media Kartu Huruf terhadap Kemampuan Membaca Permulaan Siswa Kelas I SD Muhammadiyah Majaran Kabupaten Sorong. *Jurnal Papeda: Jurnal Publikasi Pendidikan Dasar*, 3(1), 23–31. <https://doi.org/10.36232/jurnalpendidikandasar.v3i1.765>.
- Hermita, N., Widyanthi, A., Kurniaman, O., & Witri, G. (2020). Implementing Of Structural Analytical Synthetic (SAS) Methods To Improve The Ability Of Early Reading Of Elementary School Students. *Jurnal PAJAR (Pendidikan Dan Pengajaran)*, 4(1). <https://doi.org/10.33578/pjr.v4i1.7942>.
- Hirschman, K., & Wood, B. (2018). 21st century learners: Changing conceptions of knowledge, learning and the child. *The New Zealand Annual Review of Education*, 23(June), 20. <https://doi.org/10.26686/nzaroe.v23i0.5280>.
- Hosen, M., Ogbeibu, S., Giridharan, B., Cham, T.-H., Lim, W. M., & Paul, J. (2021). Individual motivation and social media influence on student knowledge sharing and learning performance: Evidence from an emerging economy. *Computers & Education*, 172. <https://doi.org/10.1016/j.compedu.2021.104262>.
- Ichsan, I. Z., Sigit, D. V., Miansyah, M., Ali, A., Arif, W. P., & Prayitno, T. A. (2019). HOTS-AEP: Higher order

- thinking skills from elementary to master students in environmental learning. *European Journal of Educational Research*, 8(4), 935–942. <https://doi.org/10.12973/eu-jer.8.4.935>.
- Indriyani, F., & Yusnani. (2021). Peran Orang Tua Dalam Pelaksanaan Pembelajaran Daring Pada Siswa Sekolah Dasar Di Pulau Rona Kecamatan Bangkinang. *Jurnal Pendidikan Dan Konseling*, 3(1), 90–96. <https://doi.org/10.31004/jpdk.v3i1.1434>.
- Jabir, A. (2020). Application Of Sas Method In Improving Beginning Reading Ability In Elementary School. *Social, Humanities, and Educational Studies (SHEs): Conference Series*, 3(3). <https://doi.org/10.20961/shes.v3i3.57025>.
- Jogezai, N. A., Baloch, F. A., Jaffar, M., Shah, T., Khilji, G. K., & Bashir, S. (2021). Teachers' Attitudes Towards Social Media (SM) Use in Online Learning Amid The COVID-19 Pandemic: The Effects of SM Use by Teachers and Religious Scholars During Physical Distancing. *Journal Heliyon*, 7(4), 1–9. <https://doi.org/10.1016/j.heliyon.2021.e06781>.
- Junedi, B., Mahuda, I., & Kusuma, J. W. (2020). Optimalisasi keterampilan pembelajaran abad 21 dalam proses pembelajaran pada Guru MTs Massaratul Mut'allimin Banten. *Transformasi: Jurnal Pengabdian Masyarakat*, 16(1), 63–72. <https://doi.org/10.20414/transformasi.v16i1.1963>.
- Kivunja, C. (2015). Unpacking the Information, Media, and Technology Skills Domain of the New Learning Paradigm. *International Journal of Higher Education*, 4(1). <https://doi.org/10.5430/ijhe.v4n1p166>.
- Krismasari, D. N. N., Kristiantari, M. G. R., & Ganing, N. N. (2019). Pengaruh Model Pembelajaran Picture and Picture Berbantuan Media Visual Terhadap Keterampilan Menulis Bahasa Indonesia. *Journal of Education Technology*, 3(4), 278. <https://doi.org/10.23887/jet.v3i4.22364>.
- Kumar, S., & Baggi, T. R. (2022). Analytical Methods for Herbal Products Containing Synthetic Cannabinoids: A Review. *Forensic Chemistry*, 27. <https://doi.org/10.1016/j.forc.2021.100396>.
- Kurniawan, O., & Noviana, E. (2016). Metode Membaca Sas (Struktural Analitik Sintetik) Dalam Meningkatkan Keterampilan Membaca Permulaan Kelas I Sdn 79 Pekanbaru. *Primary: Jurnal Pendidikan Guru Sekolah Dasar*, 5(2), 149. <https://doi.org/10.33578/jpkip.v5i2.3705>.
- Kusmayanti, S. (2019). Membaca Permulaan Dengan Metode Multisensori. *Jurnal Pendidikan UNIGA*, 13(1), 225–226. <https://doi.org/10.52434/jp.v13i1.832>.
- Lai, A., A. F., C., & Lee, G. Y. (2019). An augmented reality-based learning approach to enhancing students' science reading performances from the perspective of the cognitive load theory. *British Journal of Educational Technology*, 50(1), 232–247. <https://doi.org/10.1111/bjet.12716>.
- Lavi, R., Tal, M., & Dori, Y. J. (2021). Perceptions of STEM alumni and students on developing 21st century skills through methods of teaching and learning. *Studies in Educational Evaluation*, 70, 1–11. <https://doi.org/10.1016/j.stueduc.2021.101002>.
- Lin, P. H., Su, Y. N., & Huang, Y. M. (2019). Evaluating reading fluency behavior via reading rates of elementary school students reading e-books. *Computers in Human Behavior*, 100, 258–265. <https://doi.org/10.1016/j.chb.2018.10.004>.
- Malik, R. S. (2018). Educational Challenges in 21st Century and Sustainable Development. *Journal of Sustainable Development Education and Research*, 2(1), 9–20. <https://doi.org/10.17509/jsder.v2i1.12266>.
- Memiş, A. D., & Kandemir, H. (2019). The Relationship Between the Study Habits and Attitudes and Metacognitive Reading Comprehension Self-Awareness, Reading Comprehension, Reading Attitudes. *World Journal of Education*, 9(4), 133. <https://doi.org/10.5430/wje.v9n4p133>.
- Mohamad Johan, G. (2018). Analisis Kesalahan Berbahasa Indonesia Dalam Proses Diskusi Siswa Sekolah Dasar. *Jurnal Pendidikan Bahasa Dan Sastra*, 18(1), 136–149. <https://doi.org/10.17509/bs>.
- Muriani, Y., MS, Z., & Suseno, M. (2018). Peningkatan Kemampuan Membaca Permulaan Melalui Metode Struktural Analitik Sintetik. *AR-RIAYAH: Jurnal Pendidikan Dasar*, 2(1). <https://doi.org/10.29240/jpd.v2i1.469>.
- Mutji, E., & Suoth, L. (2021). Literasi Baca Tulis Pada Kelas Tinggi Di Sekolah Dasar. *Jurnal Ilmiah Pendidikan Citra Bakti*, 8(1), 103–113. <https://doi.org/10.38048/jipcb.v8i1.133>.
- Nathalia, K. I., Sedanayasa, G., & Japa. (2015). Pengaruh Model Pembelajaran Berbasis Proyek Terhadap Hasil Belajar Matematika Ditinjau Dari Kemampuan Penalaran Operasional Konkret. *Mimbar PGSD*, 3(1). <https://doi.org/10.23887/jjpsd.v3i1.5656>.
- Nengrum, T. A., Petta, N., Nur, M., Nengrum, T. A., Petta, N., & Nur, M. (2021). Kelebihan dan Kekurangan Pembelajaran Luring dan Daring dalam Pencapaian Kompetensi Dasar Kurikulum Bahasa Arab di Madrasah Ibtidaiyah 2 Kabupaten Gorontalo. *Jurnal Pendidikan*, 30(1), 1–12. <https://doi.org/10.32585/jp.v30i1.1190>.
- Octoberlina, L. R., & Muslimin, A. I. (2020). EFL Students Perspective towards Online Learning Barriers and Alternatives Using Moodle / Google Classroom during COVID-19 Pandemic. *International Journal of Higher Education*, 9(6), 1–9. <https://doi.org/10.5430/ijhe.v9n6p1>.



- Pambudi, B., Efendi, R. B., Novianti, L. A., Novitasari, D., & Ngazizah, N. (2019). Pengembangan Alat Peraga IPA dari Barang Bekas untuk Meningkatkan Motivasi Belajar dan Pemahaman Siswa Sekolah Dasar. *Indonesian Journal of Primary Education*, 2(2), 28. <https://doi.org/10.17509/ijpe.v2i2.15097>.
- Perni, N. N. (2019). Penerapan Metode Bermain Peran Untuk Meningkatkan Keterampilan Berbicara Menggunakan Bahasa Bali. *Journal for Lesson and Learning Studies*, 2(1), 142–149. <https://doi.org/10.23887/jlls.v2i1.17380>.
- Rahmawati. (2019). Pengaruh penerapan model pembelajaran hybrid terhadap keterampilan menulis informasi siswa. *Indonesian Journal of Education (IJES)*, 22(2), 127–133. <https://doi.org/10.26858/ijes.v22i2.11775>.
- Redhana, I. W. (2019). Mengembangkan Keterampilan Abad Ke-21 Dalam Pembelajaran Kimia. *Jurnal Inovasi Pendidikan Kimia*, 13(1), 2239–2253. <https://doi.org/10.15294/jipk.v13i1.17824>.
- Sadaf, A., & Johnson, B. L. (2017). Teachers' Beliefs About Integrating Digital Literacy Into Classroom Practice: An Investigation Based on the Theory of Planned Behavior. *Journal of Digital Learning in Teacher Education*, 33(4), 129–137. <https://doi.org/10.1080/21532974.2017.1347534>.
- Salmia & A. Muhammad Yusri. (2021). Peran Guru dalam Pembelajaran Abad 21 di Masa Pandemi Covid-19. *Indonesian Journal of Primary Education*, 5(1), 82–92. <https://doi.org/10.17509/ijpe.v5i1.31955>.
- Setiawan, A., Widjaja, S. U. M., Kusumajanto, D. D., & Wahyono, H. (2020). The effect of curriculum 2013 on economics learning achievement: Motivation as mediating variable. *Cakrawala Pendidikan*, 39(2), 444–459. <https://doi.org/10.21831/cp.v39i2.30279>.
- Setyawan, C. E., & Ahsan. (2020). Arah perencanaan pembelajaran bahasa Arap abad 21. *Jurnal Komunikasi Dan Pendidikan Islam*, 9(1), 55–82. <https://doi.org/10.36668/jal.v9i1.133>.
- Sheen, K. A., & Luximon, Y. (2021). Effect of in-app components, medium, and screen size of electronic textbooks on reading performance, behavior, and perception. *Displays*, 66. <https://doi.org/10.1016/j.displa.2021.101986>.
- Singh, V., & Thurman, A. (2019). How Many Ways Can We Define Online Learning? A Systematic Literature Review of Definitions of Online Learning. *American Journal of Distance Education*, 33(4), 289–306. <https://doi.org/10.1080/08923647.2019.1663082>.
- Sismulyasih Sb, N. (2018). Peningkatan Kemampuan Membaca Dan Menulis Permulaan Menggunakan Strategi Bengkel Literasi Pada Siswa Sd. *Primary: Jurnal Pendidikan Guru Sekolah Dasar*, 7(1), 68. <https://doi.org/10.33578/jpkip.v7i1.5341>.
- Solong, P. N. (2021). Manajemen Pembelajaran Luring dan Daring Dalam Pencapaian Kompetensi. *Tadbir: Jurnal Manajemen Pendidikan Islam*, 9(1), 19–32. <https://doi.org/10.30603/tjmpi.v9i1.2064>.
- Sugiyono. (2017). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.
- Suharsaputra, U. (2018). *Metode Penelitian Kuantitatif, Kualitatif, dan Tindakan*. PT. Refrika Aditama.
- Sulaiman, U., & Hasrianti, A. (2021). The Effect of Synthetic Structural Analytical Method on Beginning Reading Ability of Students in Makassar City. *Ethical Lingua: Journal of Language Teaching and Literature*, 8(2). <https://doi.org/10.30605/25409190.301>.
- Sutarto, S., Sari, D. P., & Fathurrochman, I. (2020). Teacher Strategies in Online Learning to Increase Students' Interest in Learning During COVID-19 Pandemic. *Jurnal Konseling Dan Pendidikan*, 8(147800), 129–137. <https://doi.org/10.29210/147800>.
- Suyono, Harsiati, & Wulandari. (2017). Implementasi Gerakan Literasi Sekolah pada Pembelajaran Tematik di Sekolah Dasar Sekolah Dasar: Kajian Teori dan Praktik Pendidikan. *Jurnal Sekolah Dasar Kajian Teori Dan Praktik Pendidikan*, 26(2), 116–123. <https://doi.org/10.17977/um009v26i22017p116>.
- Syahputra, Y. S., Santosa, R., & Supriyadi, S. (2017). Teacher'S Willingness Towards the Implementation of Scientific Approach: From Theory To Implementation. *Journal of English Education*, 2(2), 132–137. <https://doi.org/10.31327/jee.v2i2.409>.
- Tahmidaten, L., & Krismanto, W. (2020). Permasalahan Budaya Membaca di Indonesia (Studi Pustaka Tentang Problematika & Solusinya). *Scholaria: Jurnal Pendidikan Dan Kebudayaan*, 10(1), 22–33. <https://doi.org/10.24246/j.js.2020.v10.i1.p22-33>.
- Tondeur, J., Scherer, R., Baran, E., Siddiq, F., Valtonen, T., & Sointu, E. (2019). Teacher educators as gatekeepers: Preparing the next generation of teachers for technology integration in education. *British Journal of Educational Technology*, 50(3), 1189–1209. <https://doi.org/10.1111/bjet.12748>.
- Toropova, A., Myrberg, E., & Johansson, S. (2021). Teacher job satisfaction: the importance of school working conditions and teacher characteristics. *Educational Review*, 73(1), 71–97. <https://doi.org/10.1080/00131911.2019.1705247>.
- Tse, W. S., Choi, L. Y. A., & Tang, W. S. (2019). Effects of video-based flipped class instruction on subject reading motivation. *British Journal of Educational Technology*, 50(1), 385–398. <https://doi.org/10.1111/bjet.12569>.

- Ulfaeni, S., Wakhyudin, H., & Saputra, H. J. (2018). Pengembangan Media Monergi (Monopoli Energi) Untuk Menumbuhkan Kemampuan Pemahaman Konsep Ipa Siswa Kelas III SDN Pedurungan Kidul 02 Semarang. *Profesi Pendidikan Dasar*, 1(2), 143. <https://doi.org/10.23917/ppd.v1i2.4990>.
- Vuong, Q. H., Le, A. V., La, V. P., Vuong, T. T., Do, T. H., Vuong, H. M., Do, D. L., Hoang, P. H., Vu, T. H., Ho, M. T., & Ho, M. T. (2019). A dataset of vietnamese junior high school students' reading preferences and habits. *Data*, 4(49), 1–12. <https://doi.org/10.3390/data4020049>.
- Wang, S., Ying, B., & Zhang, X. (2021). Early Childhood Research Quarterly Kindergarteners' spatial skills and their reading and math achievement in second grade. *Early Childhood Research Quarterly*, 57, 156–166. <https://doi.org/10.1016/j.ecresq.2021.06.002>.
- Waruwu, M. (2020). Studi Evaluatif Implementasi Pembelajaran Daring Selama Pandemi Covid-19. *Jurnal Administrasi Pendidikan*, 27(2), 288–295. <https://doi.org/10.17509/jap.v27i2.27081>.
- Widodo, A., Indraswati, D., & Sobri, M. (2019). Analisis Nilai-Nilai Kecakapan Abad 21 dalam Buku Siswa SD/MI Kelas V Sub Tema 1 Manusia dan Lingkungan. *Tarbiyah : Jurnal Ilmiah Kependidikan*, 8(2). <https://doi.org/10.18592/tarbiyah.v8i2.3231>.
- Widodo, Arif, Indraswasti, D., Erfan, M., Maulyda, M. A., & Rahmatih, A. N. (2020). Profil minat baca mahasiswa baru PGSD Universitas Mataram. *Premiere Educandum*, 10(1). <https://doi.org/10.25273/pe.v10i1.5968>.
- Wulandari, I. G. A. A. (2020). Implementation of the 2013 Curriculum Based on a Scientific Approach (Case Study at SD Cluster II Kintamani). *International Journal of Elementary Education*, 4(3), 422–430. <https://doi.org/10.23887/ijee.v4i3.28172>.
- Yuniarti, A., & Radia, E. H. (2020). Development of Comic Mathematics Teaching Materials on Flat- Building Material to Increase Reading Interest in Class IV Elementary School Students. *Journal of Education Technology*, 4, 415–423. <https://doi.org/10.23887/jet.v4i4.30034>.
- Yusmiati, Y. (2021). Applying Sas (Synthetic Analitical Structure) Method In Improving Initial Reading Skills At Grade I Sd Negeri 81 Pekanbaru. *Jurnal Pajar (Pendidikan Dan Pengajaran)*, 5(2). <https://doi.org/10.33578/pjr.v5i2.8267>.
- Zhao, Y., & Wu, X. (2021). Impact of visual processing skills on reading ability in Chinese deaf children. *Research in Developmental Disabilities*, 113. <https://doi.org/10.1016/j.ridd.2021.103953>.